

CLAIMS

WHAT IS CLAIMED IS:

1 1. A power semiconductor module for mounting on a flat body,
2 comprising a plurality of partial modules, each of said partial modules having:
3 a base plate;
4 a framelike housing;
5 terminal elements for load terminals and auxiliary terminals;
6 at least one electrically insulated substrate disposed inside said housing
7 on said base plate, said substrate having an insulation body with a plurality of metal
8 connection tracks located therein and insulated from one another, and power
9 semiconductor components, located on said connection tracks and electrically
10 connected thereto; and
11 means for connecting adjacent partial modules to one another.

1 2. The power semiconductor module of claim 1, wherein said means for
2 connecting is a cap.

1 3. The power semiconductor module of claim 2, wherein
2 said cap is connected to said partial modules by means of snap-detent
3 connections, said housing has detent lugs, and said cap has abutments formed to
4 cooperate with said detent lugs.

1 4. The power semiconductor module of claim 2, wherein

2 each partial module has at least two open-slotlike recesses on a side
3 thereof, and positioned so that, when said partial modules are assembled into a power
4 semiconductor module, said recesses in sides of adjacent partial modules face one
5 another to form closed slots.

1 5. The power semiconductor module of claim 4, wherein
2 said cap has round slotlike recesses for receiving screws, which, in the
3 abutting region of said partial modules, are aligned with said recesses that form said
4 slots therein.

1 6. The power semiconductor module of claim 1, wherein
2 each of said partial modules has, on a first side adjacent to another partial
3 module, at least one detent lug, and on a second, opposite, side thereof has at least
4 one abutment adapted to cooperate with a detent lug in an adjacent partial module

1 7. The power semiconductor module of claim 1, wherein said means
2 for connecting comprises fixing connections.

1 8. The power semiconductor module of claim 7, wherein
2 said fixing connections include a snap-detent connection for connection of
3 a first partial module to an adjacent partial module.

1 9. The power semiconductor module of claim 8, wherein
2 each of said partial modules has at least two open-slotlike recesses on a
3 side thereof, and positioned so that, when said partial modules are assembled into a

4 power semiconductor module, said recesses in said sides of adjoining partial modules
5 face one another to form closed slots.

1 10. The power semiconductor module of claim 7, wherein
2 said fixing connections include a rail that covers all said recesses and said
3 slots formed thereby in adjacent partial modules.